

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A manually-powered injection device for painless intramuscular injection of an injectable liquid composition from with a reservoir, comprising:
 - a) a housing having a base for semi-permanent attachment to the skin of a patient,
 - b) an injection needle disposed substantially perpendicular to the base and within the housing, the needle having an injection end, and configured for axial movement manually between a first position wherein the injection end is within the housing and a second position wherein the injection end extends outwardly from the base to a distance sufficient for intramuscular insertion thereof, the injection needle having an outside diameter greater than 0.10 mm and less than about 0.38 mm that effects a painless insertion of the needle,
 - c) a means for retaining a reservoir containing an injectable liquid composition,
 - d) a means for providing liquid communication between the retained reservoir and the injection needle, and
 - e) ~~a means for injecting the injectable liquid composition from the retained reservoir through the needle~~ a manually-powered spring that exerts pressure upon the injectable liquid composition within the retained reservoir to inject the injectable liquid at a substantially constant volumetric flow rate of about 0.5 $\mu\text{L/s}$ to about 20 $\mu\text{L/s}$ from the reservoir through the needle, which effects a painless injection.
2. (canceled)
3. (original) The injection device of Claim 1, further comprising a needle insertion securement configured to retain the inserted needle in its second position while injecting the liquid composition.

4. (currently amended) The injection device of Claim 3 further comprising a means for retracting the injection needle, which retracts ~~whereby~~ the injection end of the needle ~~can be retracted~~ from its second position to a third position ~~wherein the injection end of the needle is~~ within the housing.
5. (previously presented) The injection device of Claim 3 further comprising a needle carriage to which the injection needle is affixed, the needle carriage being configured for axial movement within the housing between a first position associated with the first position of the injection needle, and a second position associated with the second position of the injection needle, in response to a manual force applied by a person.
6. (original) The injection device according to Claim 5 further comprising an implement for use in applying the manual force to the needle carriage.
7. (original) The injection device according to Claim 5 wherein the needle insertion securement is configured to retain the needle carriage in its second position.
8. (original) The injection device according to Claim 7, further comprising a retracting means comprising a disengagement means configured to disengage the needle insertion securement from the needle carriage, and a power means configured to bias the needle carriage to a third position that is associated with a third position of the injection needle wherein the injection end of the needle is within the housing.
9. (previously presented) The injection device according to Claim 1 wherein the device further comprises a separable base, a base securement means configured for separable securement of the separable base to the housing, and a base separation means configured for separation of the separable base from the housing, wherein the separable base comprises an adhesive for attachment thereof to the skin of the patient.
10. (currently amended) A manually-powered injection device for painless intramuscular injection of an injectable liquid composition, comprising:

- a) a housing having a base for semi-permanent attachment to the skin of a patient,
- b) an injection needle disposed substantially perpendicular to the base and within the housing, the needle having an injection end, and configured for axial movement manually between a first position wherein the injection end is within the housing and a second position wherein the injection end extends outwardly from the base to a distance sufficient for intramuscular insertion thereof, the injection needle having an outside diameter greater than 0.10 mm and less than about 0.38 mm that effects a painless insertion of the needle,
- c) a reservoir containing an injectable liquid composition,
- d) a means for liquid communication between the reservoir and the injection needle, and
- e) ~~a means for injecting the liquid composition from the reservoir to the injection end of the needle~~ a manually-powered spring that exerts pressure upon the injectable liquid composition within the retained reservoir to inject the injectable liquid at a substantially constant volumetric flow rate of about 0.5 μ L/s to about 20 μ L/s from the reservoir through the needle, which effects a painless injection.

11. (canceled)

12. (original) The injection device of Claim 10, further comprising a needle insertion securement configured to retain the inserted needle in its second position while injecting the liquid composition.

13. (currently amended) The injection device of Claim 12 further comprising a means for retracting the injection needle, which retracts ~~whereby the injection end of the needle can be retracted~~ from its second position to a third position ~~wherein the injection end of the needle is within the housing.~~

14. (original) The injection device of Claim 12 further comprising a needle carriage to which the injection needle is affixed, the needle carriage being configured for axial movement between a first position associated with the first position of the injection needle, and a second position associated with the second position of the injection needle, in response to a manual force applied by a person.

15. (original) The injection device according to Claim 14 further comprising an implement for use in applying the manual force to the needle carriage.
16. (canceled)
17. (currently amended) The injection device according to Claim 22[[16]], further comprising a retracting means comprising a disengagement means configured to disengage the needle insertion securement from the needle carriage, and a power means configured to bias the needle carriage to a third position that is associated with a third position of the injection needle wherein the injection end of the needle is within the housing.
18. (original) The injection device according to Claim 14 wherein the needle carriage comprises threads, and the reservoir comprises cooperating threads that can engage and retain the threads of the reservoir.
19. (original) The injection device according to Claim 18 wherein the reservoir comprises a penetrable membrane, wherein when the cooperating threads of the reservoir and the needle carriage are engaged, a piercing conduit in liquid communication with the injection needle can penetrate the penetrable membrane to establish liquid communication between the reservoir and the injection needle.
20. (currently amended) The injection device according to Claim 10 wherein the device further comprises a separable base, a base securement means that configured for separable secures securement of the separable base to the housing, and a base separation means that separates configured for separation of the separable base from the housing, wherein the separable base comprises an adhesive for attachment thereof to the skin of the patient.
21. (canceled)
22. (new) The injection device according to Claim 14 wherein the needle insertion securement is configured to retain the needle carriage in its second position.